

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A method for a computerized analysis of ~~a texture of image data~~ mammogram in digital form of a breast of a patient, comprising:

~~extracting features from the image data~~ mammogram at least one fractal-based feature associated with a texture of a parenchyma of the breast;

~~applying the extracted features to a~~ said at least one fractal-based feature to at least one of a linear discriminant classifier and an artificial neural network classifier; and

~~determining generating a risk marker indicative of a breast disease risk for said patient a fractal characteristic of the image data based on an output of the~~ at least one of a linear discriminant classifier and an artificial neural network classifier.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The method according to Claim 1, wherein the extracting step comprises:

~~determining~~ extracting plural fractal-based ~~[[the]]~~ features at multiple scales.

Claim 4 (Currently Amended): The method according to Claim 1, wherein the extracting step comprises:

~~determining~~ extracting plural fractal-based ~~[[the]]~~ features from an area of a region of interest of the ~~image data~~ mammogram based on a box-counting method.

Claim 5 (Currently Amended): The method according to Claim 1, wherein the extracting step comprises:

~~determining~~ extracting plural fractal-based ~~[[the]]~~ features from a volume of a region of interest of the ~~image data~~ mammogram based on a general Minkowski model.

Claim 6 (Currently Amended): The method according to Claim 1, wherein the applying step comprises:

applying the features to a linear discriminant analysis classifier.

Claim 7 (Currently Amended): The method according to Claim 1, wherein the applying step comprises:

applying the features to an artificial neural network classifier.

Claim 8 (Currently Amended): The method according to Claim 1, wherein the ~~determining~~ extracting step comprises:

calculating a fractal dimension from a slope.

Claim 9 (Currently Amended): The method according to Claim 1, wherein the ~~determining~~ extracting step comprises:

calculating a fractal dimension from at least two slopes.

Claim 10 (Currently Amended) The method according to Claim 1, wherein the extracting ~~determining~~ step comprises:

extracting from the mammogram ~~determining~~ a multi-fractal characteristic associated with the texture of the parenchyma of the breast ~~of the image data~~.

Claim 11 (Currently Amended): A system ~~configured to process image data to determine a fractal characteristic of the image data~~ for computerized analysis of a mammogram in digital form of a breast of a patient, comprising:

a feature extraction mechanism that extracts from the mammogram at least one fractal-based feature associated with a texture of a parenchyma of the breast ~~features from the image data~~;

a classifier mechanism including at least one of a linear discriminant classifier and an artificial neural network to which the at least one fractal-based feature is applied ~~that applies the extracted features to a classifier~~; and

~~a fractal determination mechanism~~ risk marker generator that generates a risk marker indicative of a breast disease risk for said patient ~~determines a fractal characteristic of the image data~~ based on an output of the classifier mechanism.

Claim 12 (Canceled).

Claim 13 (Currently Amended): The system according to Claim 11, wherein the feature extraction mechanism extracts plural fractal-based ~~[[the]]~~ features at multiple scales.

Claim 14 (Currently Amended): The system according to Claim 11, wherein the feature extraction mechanism extracts plural fractal-based ~~[[the]]~~ features from an area of a region of interest of the ~~image data~~ mammogram based on a box-counting method.

Claim 15 (Currently Amended): The system according to Claim 11, wherein the feature extraction mechanism extracts plural fractal-based ~~[[the]]~~ features from a volume of a region of interest of the ~~image data~~ mammogram based on a general Minkowski model.

Claim 16 (Currently Amended): The system according to Claim 11, wherein the classifier mechanism ~~applies the features to~~ comprises a linear discriminant analysis classifier.

Claim 17 (Currently Amended). The system according to Claim 11, wherein the classifier mechanism ~~applies the features to~~ comprises an artificial neural network classifier.

Claim 18 (Currently Amended): The system according to Claim 11, wherein the feature extraction ~~determination~~ mechanism calculates a fractal dimension from a slope.

Claim 19 (Currently Amended): The system according to Claim 11, wherein the feature extraction ~~fractal determination~~ mechanism calculates a fractal dimension from at least two slopes.

Claim 20 (Currently Amended) The system according to Claim 11, wherein the ~~fractal determination mechanism determines~~ feature extraction mechanism extracts from the mammogram a multi-fractal characteristic associated with the texture of the parenchyma of the breast ~~of the image data~~.

Claim 21 (Currently Amended): A computer ~~program-product~~ readable medium storing instructions for execution on a computer system, which when executed by the

computer system, causes the computer system to perform a method for a computerized analysis of a mammogram in digital form of a breast of a patient, comprising the steps of:

extracting ~~features~~ from the ~~image data~~ mammogram at least one fractal-based feature associated with a texture of a parenchyma of the breast;

applying ~~the extracted features to a~~ said at least one fractal-based feature to at least one of a linear discriminant classifier and an artificial neural network classifier; and

~~determining a fractal characteristic of the image data~~ generating a risk marker indicative of a breast disease risk for said patient based on an output of the at least one of a linear discriminant classifier and an artificial neural network classifier.

Claim 22 (Canceled).

Claim 23 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the extracting step comprises:

~~determining~~ extracting plural fractal-based ~~[[the]]~~ features at multiple scales.

Claim 24 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the extracting step comprises:

~~determining the~~ extracting plural fractal-based features from an area of a region of interest of the ~~image data~~ mammogram based on a box-counting method.

Claim 25 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the extracting step comprises:

~~determining the~~ extracting plural fractal-based features from a volume of a region of interest of the ~~image data~~ mammogram based on a general Minkowski model.

Claim 26 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the applying step comprises:

applying the features to a linear discriminant analysis classifier.

Claim 27 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the applying step comprises:

applying the features to an artificial neural network classifier.

Claim 28 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the ~~determining~~ extracting step comprises:

calculating a fractal dimension from a slope.

Claim 29 (Currently Amended): The computer ~~program-product~~ readable medium according to Claim 21, wherein the ~~determining~~ extracting step comprises:

calculating a fractal dimension from at least two slopes.

Claim 30 (Currently Amended) The computer ~~program-product~~ readable medium according to Claim 21, wherein the extracting ~~determining~~ step comprises:

extracting from the mammogram ~~determining~~ a multi-fractal characteristic associated with the texture of the parenchyma of the breast of the image data.